REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

A. Claim amendments

Claim 3 is amended to clarify that "its" refers to the stem by revising the claim language to read "an entire length of the stem." It is respectfully submitted that no new matter is added.

Claims 1, 2, and 4-6 are left unchanged.

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

B. Rejection of claim 3 under 35 U.S.C. § 112 second paragraph

Reconsideration of this rejection is respectfully requested, in view of the amendment to claim 3, on the basis the amended claim 3 is clear and definite.

As discussed above, claim 3 is amended to clarify that "its" refers to the stem by revising the claim language to read "an entire length of the stem."

It is respectfully submitted that amended claim 3 is clear and definite, and withdrawal of this rejection is respectfully requested.

Further, since the Office action has already interpreted claim 3 as having a duct provided through the stem (on page 9), it is respectfully submitted that the amendment to claim 3 does not raise any new issues that would require additional search or consideration.

2. Rejection of claims 1, 2, 4, and 6 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,708,599 (*Suzuki*) in view of U.K. publication no. GB 2,133,585 (*Ott*)

Reconsideration of this rejection is respectfully requested, on the basis that the proposed combination of the *Suzuki* patent and the *Ott* publication fails to disclose each and every recited feature of pending claim 1, and thus, the rejection fails to establish a *prima facie* case of obviousness with respect to claim 1. The remaining claims 2, 4, and 6 depend from claim 1, and are therefore patentable as containing all of the recited elements of claim 1, as well as for their respective recited features.

By way of review, the embodiment of pending claim 1 requires a compressor, containing a compressor element, and having a rotor chamber connected to an inlet pipe and an outlet pipe. A reservoir is in communication with the outlet pipe. A pressure regulating system includes an inlet valve associated with the inlet pipe. A double-acting piston is connected to the inlet valve and is movable in a cylinder to open and close the inlet valve without the use of a spring acting on the piston.

A bridge bridging the inlet valve includes between the inlet pipe and the rotor chamber a successively mounted gas stream limiter and a non-return valve which only admits gas into the rotor chamber.

A gas pipe connects the reservoir to a part of the bridge situated between the gas stream limiter and the non-return valve. A relief valve is associated with the gas pipe.

The double acting piston divides the cylinder into first and second closed cylinder chambers. The first cylinder chamber, on a first side of the piston facing away from the inlet valve, is connected to a part of the rotor chamber located near the inlet valve via a first pipe, wherein the connection is always open.

On a second side of the piston, the second cylinder chamber is connected to a part of the rotor chamber situated near the inlet valve and to the non-return valve via a second pipe.

With the above described configuration, the bridge bridging the inlet valve, in combination with the relief valve, helps to control the piston connected to the inlet valve, which thus allows the use of an inexpensive electromagnetic control valve with a small passage to control the relief valve (specification page 9, line 20 through page 10, line 24; page 11, lines 1-11; page 12, lines 11-16).

Turning to the *Suzuki* patent, it is respectfully submitted that the *Suzuki* patent fails to disclose every feature of pending claim 1. In particular, the *Suzuki* patent fails to disclose the working chamber section, on the side of the piston facing away from the inlet valve, connected to a part of the rotor chamber located near the inlet valve, *wherein the connection is always open*, as is required by pending claim 1. Further, the *Suzuki* patent fails to disclose a bridge bridging the inlet valve that includes between the inlet pipe and the rotor chamber a successively mounted gas stream limiter and a non-return valve which only admits gas into the rotor chamber, as is required by pending claim 1.

The *Suzuki* patent discloses a rotary compressor unit that includes a compressor, a suction valve, and a balancing valve (abstract). A piston cylinder unit 9 is mounted onto a casing 2A of the suction valve 2 and provided with a cylinder 9A having openings 9Aa-9Ad (Figs. 1-2; col. 2, lines 36-38).

The cylinder 9A includes a gas release valve element 9B for opening and closing the gas release opening 9Ac, rods 9C, 9D provided with the valve elements 9B and 2B, and an unloader piston 9E dividing a working chamber 9F into two working chamber sections 9Fa, 9Fb (Figs. 1-2; col. 2, lines 38-45).

The opening 9Aa of the cylinder 9A is communicated with a discharge line section 1Ba of the discharge line 1B on the downstream side of the after-cooler 6 through a valve opening line 10, a first three-way solenoid valve 11 and an operation line 12 (Figs. 1-2; col. 2, lines 49-53).

The opening 9Ab of the cylinder 9A is also communicated with the discharge line section 1Ba through a valve closing line 13 and a second three-way solenoid valve 14 and the operation line 12 (Figs. 1-2; col. 2, lines 53-57). The second three-way solenoid valve 14 is communicated with the outlet port 2Ab of the suction valve

means 2 through a negative pressure communicating line 16 (Figs. 1-2; col. 2, lines 59-62).

The opening 9Ac of the cylinder 9A is communicated with a heat exchanger 4a within the cooler 4 through an exhaust gas line 15, wherein the cooler 4 is positioned in the discharge line 1B (Figs. 1-2; col. 2, lines 57-59).

As can be seen in Figs. 1 and 2, the working chamber section 9Fb, on the side of the piston 9E facing away from the inlet valve, communicates via the opening 9Ab with the discharge line section 1Ba through a valve closing line 13 and a second three-way solenoid valve 14 and the operation line 12. Since there is a three-way solenoid valve in this circuit that selectively closes the negative pressure communication line 16, the working chamber section 9Fb is not connected to a part of the rotor chamber located near the inlet valve, *wherein the connection is always open*, as is required by pending claim 1 (Figs. 1-2; col. 3, line 1 through col. 4, line 19).

On page 4 of the Office action, the working chamber section 9Fa of the *Suzuki* patent is incorrectly identified as corresponding to the working chamber section, on the side of the piston facing away from the inlet valve, since the working chamber section 9Fa is actually on the side of the piston that faces towards the inlet valve (Figs. 1-2). Even if the working chamber section 9Fa were considered to correspond to the working chamber section, on the side of the piston facing away from the inlet valve, as recited in pending claim 1, the working chamber section 9Fa is not connected to a part of the rotor chamber located near the inlet valve, but rather is connected via valve opening line 10 and operation line 12 to the discharge line 1B at the discharge end of the compressor, and not near the inlet valve, as is required by pending claim 1.

On page 5, the Office action identifies pipe 15 as connecting to one of the chambers of the rotor chamber, however, the exhaust gas line 15 of the *Suzuki* patent is not connected to a working chamber of the cylinder 9A, as is required by pending claim 1, but rather to an exhaust opening 9Ad in the cylinder 9A (Figs. 1-2). Further, while exhaust gas line 15 may be an always open connection, the exhaust gas line 15 is connected to the cooler 4 in the discharge line 1B at the discharge end of the

compressor 1 (Figs. 1-2), and not near the inlet valve, as is required by pending claim 1.

Furthermore, as acknowledged on page 5 of the Office action, the *Suzuki* patent fails to disclose a bridge bridging the inlet valve, as is required by pending claim 1.

The Office action turns to the *Ott* publication to teach a "bridge." However, as discussed in detail in the response filed on June 12, 2008, the *Ott* publication fails to disclose a bridge bridging the inlet valve including between the inlet pipe and the rotor chamber a successively mounted gas stream limiter and a non-return valve which only admits gas into the rotor chamber, as is required by pending claim 1. The *Ott* publication also fails to disclose the always open connection between a first cylinder chamber and the rotor chamber, as is required by pending claim 1.

Since the *Ott* publication does not disclose an always open connection between the first cylinder chamber and the rotor chamber, the *Ott* publication cannot be relied upon to cure the deficiencies of the *Suzuki* patent, which also fails to disclose an always open connection between the first cylinder chamber and the rotor chamber, as is required by pending claim 1.

Thus, the proposed combination of the *Suzuki* patent and the *Ott* publication fails to disclose an always open connection between the first cylinder chamber and the rotor chamber, as is required by pending claim 1, and a *prima facie* case of obviousness cannot be established with respect to pending claim 1.

Further still, the Office action relies on the *Ott* publication to show a bridge that includes a gas stream limiter (said bridge acknowledged to be missing from the *Suzuki* patent). The Office action indicates that check valve 11 in the *Ott* publication is considered to be a gas stream limiter. However, the gas stream limiter of pending claim 1 inherently allows gas to flow in both directions across the limiter (see Figs. 2 and 3 of the pending application). Since a check valve only allows fluid to flow in one direction therethrough, the check valve 11 of the *Ott* publication cannot be considered a gas stream limiter as required by amended claim 1.

Accordingly, the proposed combination of the *Suzuki* patent and the *Ott* publication fails to disclose a gas stream limiter in a bridge, as is required by pending claim 1, and a *prima facie* case of obviousness cannot be established with respect to pending claim 1.

Even further still, the check valve 11 is not successively positioned with the check valve 13 within the bypass 12 of the *Ott* publication, but rather the check valve 11 is positioned in the suction line 2 outside of the bypass. Thus, the *Ott* publication fails to disclose a successively mounted gas stream limiter and a non-return valve within a bridge, as required by pending claim 1.

Accordingly, the proposed combination of the *Suzuki* patent and the *Ott* publication fails to disclose a successively mounted gas stream limiter and a non-return valve within a bridge, as is required by pending claim 1, and a *prima facie* case of obviousness cannot be established with respect to pending claim 1.

For the numerous reasons discussed above, even if a person of ordinary skill in the art were to combine the features of the *Suzuki* patent and the *Ott* publication, the proposed combination would fail to disclose every recited feature of pending claim 1, and a *prima facie* case of obviousness cannot be established with respect to pending claim 1. Therefore, withdrawal of this rejection is respectfully requested.

As mentioned above, applicants submit that independent claim 1 is patentable and therefore, claims 2, 4, and 6, which depend from claim 1, are also considered to be patentable as containing all of the elements of claim 1, as well as for their respective recited features.

3. Rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,708,599 (*Suzuki*) in view of U.K. publication no. GB 2,133,585 (*Ott*) and further in view of U.S. patent no. 4,406,589 (*Tsuchida et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Tsuchida* patent fails to provide for the deficiencies of the proposed combination of the *Suzuki* patent and the *Ott* publication, as discussed above with respect to pending claim 1, from which claim 3 depends.

Further, while the *Tsuchida* patent discloses relief passages 46A, 46B along the axial direction of the check valve 35 and the main valve 36, the relief passages 46A, 46B do not extend over the entire length of the stem (Figs. 2A and 2B), as is required by claim 3.

Further still, if the relief passages 46A, 46B of the *Tsuchida* patent were added to extend along the entire length of the stem (rods 9C, 9D) of the *Suzuki* patent, the exhaust gas line 15 would always be in direct communication with the suction valve 2, thus creating an open circuit between the exhaust gas line at the discharge line 1B and the suction valve at the suction line 1A of the *Suzuki* patent. Such a combination would destroy the function of the *Suzuki* patent, and thus a person having ordinary skill in the art would not have made such a combination.

Therefore, the proposed combination of the *Tsuchida* patent with the *Suzuki* patent and the *Ott* publication fails to disclose every feature of claim 3, and a person having ordinary skill in the art would not have made such a combination. Thus, a *prima facie* case of obviousness cannot be established, and withdrawal of this rejection is respectfully requested.

Accordingly, withdrawal of this rejection is respectfully requested.

4. Rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,708,599 (*Suzuki*) in view of U.K. publication no. GB 2,133,585 (*Ott*) and further in view of Belgium Patent BE 1,012,655 (*Coppens*)

Reconsideration of this rejection is respectfully requested on the basis that the *Coppens* patent fails to provide for the deficiencies of the proposed combination of the and *Suzuki* patent and the *Ott* publication, as discussed above with respect to pending claim 1, from which claim 5 depends.

Accordingly, withdrawal of this rejection is respectfully requested.

5. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,

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